



# Case Study

## Work Assignment Service

Abiro Mobilizer

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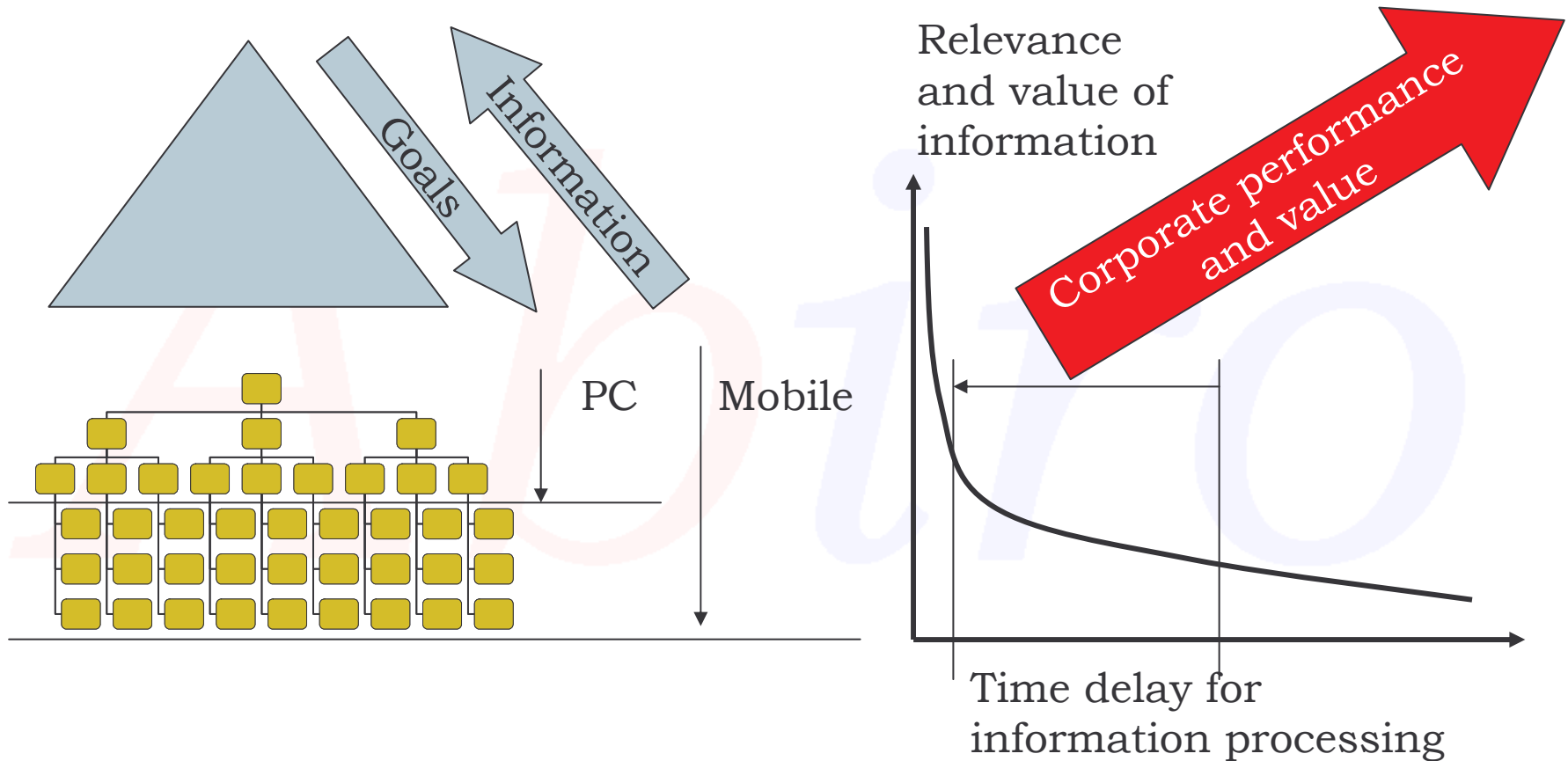
Revision PC1

# Overview

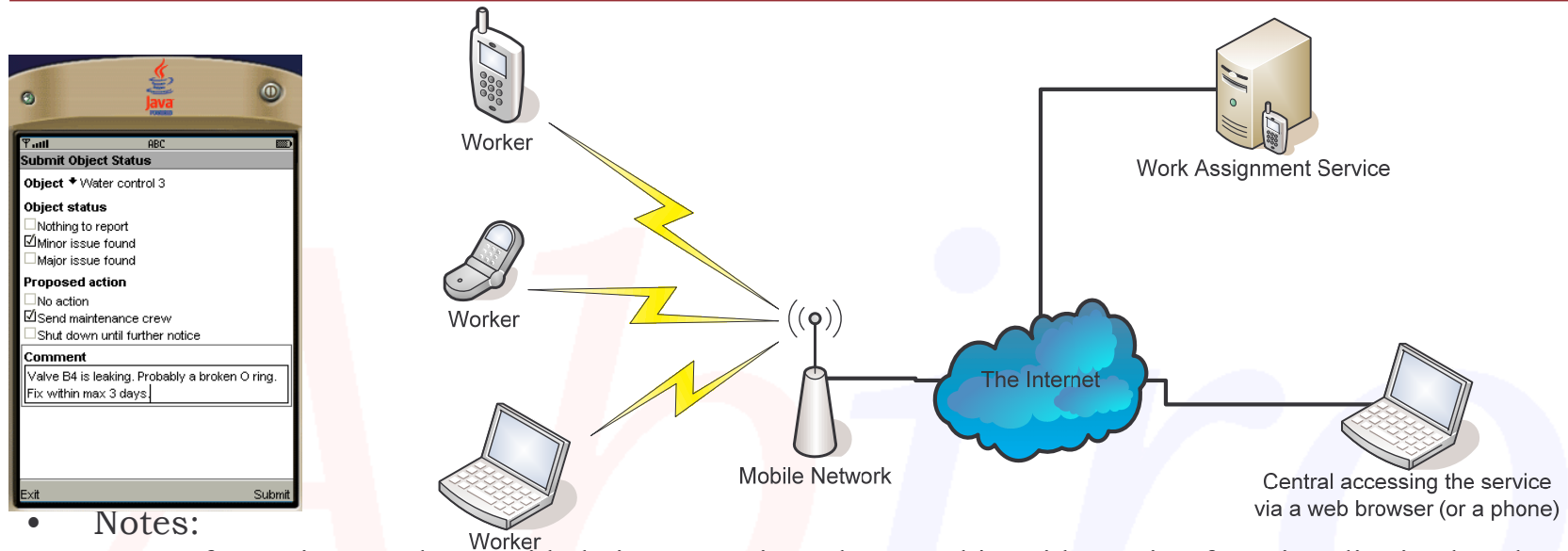
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- A service for handling the assigning of work orders to, and status of, workers that roam around and perform transient work at many places
- Potential users are e.g. maintenance crews, taxi drivers, travelling sales people, truck drivers, insurance personnel
- By using mobile phones as access terminals means communication is possible both ways, at any time and in real time

# Time and Equipment Constraints



# Service Setup



- Notes:

- Information can be provided via text, voice, photo and/or video using functionality in the phone
- The personnel at Central needs not be at the same location as the service, meaning the service can potentially be...
  - provided across geographical borders and time zones
  - outsourced and/or shared between companies
- All communication needs to be encrypted and users must log in for proper authentication
- The operator network is transparent to the communication
- Entry forms etc need to be customized per profession (ideally based on service-controlled templates)
- Using a Java application in the phone means the workers need only one entry point for all related information transfer and access (instead of both browser and SMS for instance)

# Principal Functionality

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- Work orders are broadcast or sent to given Workers by Central
- Central can always see roughly where Workers are
- Workers can select from the public work orders based on proximity to the location etc
- Workers send in status reports that are followed up by Central
- Central and Workers have access to information about all the others, so that they can be contacted via voice, SMS, IM etc
- The system should have its own closed-circuit IM and mail function
  - IM for transient urgent conversations
  - Email for e.g. posting improvement suggestions
- Everything should be in real time (seconds)
- The system should create statistics on work order fulfilment, issues found, issues fixed etc, shown e.g. as graphs to management
- Central and Workers should also be able to access the system via web pages from a PC
  - Normally Central (being in an office) will use the web pages

# Options

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- Some uses might be simple enough to need only a reporting system, which can be achieved via existing services
  - this includes reporting via text, photo, audio and video
- The phone's camera could be used for taking photos of broken equipment, barcodes, signed receipts, water damages, accidents etc.
- The phone's voice recording could be used to record and send spoken notes
  - potentially quicker and more intuitive than entering lengthy text
- If the phone has a full alphanumeric keypad it should be possible to use without any changes
- Java applications can receive SMS (and MMS) internally, hidden from user view, hence this can be used to push out messages to users that are then presented in the best way possible by the application
- The application could also poll the service, but that could become more expensive unless the traffic cost is negotiated to be very low or free
- Data validation can easily be done in the phone before sending any information, speeding up entry and minimizing risk of "bouncing"